

I claim:

1. An electronic system for facilitating communication between a presenter and a plurality of participants over a communication network comprising:

5 a presenter computer having a presenter graphical user interface to control the display of a presentation, authorize participants to pose a question, and respond to the the question;

10 a plurality of participant computers each having a presenter graphical user interface for viewing the presentation, requesting permission to pose the question, and generating the question;

a system server configured for brokering communication between the presenter computer and the plurality of participant computers comprising:

15 a presentation conversion engine, wherein the presentation conversion engine converts application specific presentation files to a universal image format file;

a whiteboard application, wherein the whiteboard application in response to commands generated by the presenter graphical user interface controls the presentation on the participant graphical user interface;

20 a web server application, wherein the web server application controls receipt of commands from the presenter graphical user interface, push of controls to the participant graphical user interfaces and storage of the universal image format file for transmission to the participant graphical user interface;

a database, wherein the application specific presentation file is stored in the database; and

25 a core engine for controlling communications and interactions between all of the other applications on the system server as well as communication with the presenter computer and the participant computers.

30 2. The system recited in claim 1, further comprising a media engine, wherein the media engine controls the delivery of audio and/or video media from the presenter

computer to the plurality of participant computers by creating a first IP tunnel from the presenter computer through the system server to the plurality of participant computers.

3. The system recited in claim 2, wherein upon an authorization request identifying an authorized participant computer transmitted from the presenter computer to the system server, the media engine creates a second IP tunnel from the authorized participant computer to the presenter computer and the plurality of participant computers.

4. The system recited in claim 2, wherein the media transmitted over the first IP tunnel is processed only by media codecs resident on the presenter computer and the plurality of participant computers and is not processed by the system server.

5. The system recited in claim 1, wherein the whiteboard application provides tools on the presenter graphical user interface to create annotations on the presenter graphical user interface to be displayed on the presentation viewed on the participant graphical user interface

6. The system recited in claim 1, wherein the system server receives the annotations created on the presenter graphical user interface and transmits the annotations to the participant graphical user interface.

7. The system recited in claim 1, wherein the whiteboard application converts the universal image format file to an image stream and transmits the image stream to the participant computers.

8. An apparatus for facilitating communication between a presenter on a presenter computer having a presenter graphical user interface to control the display of a presentation, authorize participants to pose a question, and respond to the question; and a plurality of participants on a plurality of participant computers each having a presenter graphical user interface for viewing the presentation, requesting permission to

post the question, and generating the question over a communication network comprising:

5 a presentation conversion engine, wherein the presentation conversion engine converts application specific presentation files to a universal image format file;

a whiteboard application, wherein the whiteboard application in response to commands generated by the presenter graphical user interface controls the presentation on the participant graphical user interface;

10 a web server application, wherein the web server controls receipt of commands from the presenter graphical user interface, push of controls to the participant graphical user interfaces, and storage of the universal image format file for transmission to the participant graphical user interface;

a database, wherein the application specific presentation file is stored in the database; and

15 a core engine for controlling communications and interactions between all of the other applications on the system server as well as communication with the presenter computer and the participant computers.

20 9. The apparatus recited in claim 8, further comprising a media engine, wherein the media engine controls the delivery of audio and/or video media from the presenter computer to the plurality of participant computers by creating a first IP tunnel from the presenter computer through the system server to the plurality of participant computers.

25 10. The apparatus recited in claim 9, wherein upon an authorization request identifying an authorized participant computer transmitted from the presenter computer to the system server, the media engine creates a second IP tunnel from the authorized participant computer to the presenter computer and the plurality of participant computers.

11. The apparatus recited in claim 8, wherein the media transmitted over the first IP tunnel is processed only by media codecs resident on the presenter computer and the plurality of participant computers and is not processed by the system server.

5 12. The apparatus recited in claim 8, wherein the whiteboard application provides tools on the presenter graphical user interface to create annotations on the presenter graphical user interface to be displayed on the presentation viewed on the participant graphical user interface

10 13. The apparatus recited in claim 8, wherein the system server receives the annotations created on the presenter graphical user interface and transmits the annotations to the participant graphical user interface.

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15 14. The apparatus recited in claim 8, wherein the whiteboard application converts the universal image format file to an image stream and transmits the image stream to the participant computers.